UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

In re: Methyl Tertiary Butyl Ether ("MTBE") Products Liability Litigation	Master File No. 1:00-1898 MDL 1358 (SAS) M21-88
This document pertains to: *City of New York v. Amerada Hess Corp. et al.*, Case No. NY-04-CV-03417	

REPLY MEMORANDUM OF LAW IN FURTHER SUPPORT OF EXXON MOBIL CORPORATION'S MOTION TO EXCLUDE OPINIONS OF PLAINTIFF'S EXPERT DAVID TERRY

PRELIMINARY STATEMENT

Plaintiffs admit that "simplifying assumptions **had to be made in order to proceed** with the [numerical modeling] work" performed by Mr. Terry. *See Declaration of Marcel Moreau in Opposition to Defendant ExxonMobil's Motion to Exclude Opinions of David Terry* ("Moreau Opp. Decl."), at ¶ 10 (emphasis added). In other words, Plaintiffs wanted a numerical result and their expert did what he had to do to achieve it. But what had to be done in order to proceed does not necessarily coincide with what should be done to achieve a reliable outcome, and in this case, it most certainly did not. Indeed it is the very **necessity** of simplifying assumptions that raises suspicions about the reliability of Mr. Terry's modeling, and it is Mr. Terry's results that repeatedly prove these suspicions.

ARGUMENT

I. WHEN YOU GIVE A MODEL APPLES YOU CAN'T EXPECT LEMONADE.

One fact that has remained immutable among the various iterations and corrections of Mr. Terry's reports and the depositions and declarations of Plaintiffs' various experts: **these experts do not know the precise volume and timing of the vast majority of alleged releases modeled by Mr. Terry.** *See, e.g., Declaration of David B. Terry, P.G.* (July 27, 2009) ("Terry Opp. Decl.") at ¶¶ 19, 21 ("While some of the releases could have occurred prior to the reporting date, an analysis to determine a more exact date would have been speculative [and] not reliable…."); *Moreau Opp. Decl.* at ¶¶ 10, 22 ("my review of site files for facilities in Queens and for many other sites around the country, indicates that the exact volume of gasoline released from an underground storage tank system is more often than not unknowable."). As a result, certain "simplifying assumptions" had to be made. *Id.* at ¶ 10. Defendant already has briefed the

reasons that these assumptions render Mr. Terry's predictions unreliable, and we will not burden the Court with a recitation of those points again here.

However, what is apparent now more than ever before is Plaintiffs' recognition of their experts' work as a "**qualitative**" evaluation. *See Pls.' Mem.* at 13-14 ("[T]he City's experts **qualitatively evaluated** this and other sites by examining, if known, the volumes of excavated soils,[1] the levels of contamination in groundwater, the amount of contamination removed through a remediation system, the presence of free product, and other such information that allows an expert to **qualitatively** determine that a **significant** release of gasoline occurred at the sites."[2] (citing *Moreau Opp. Decl.* at ¶ 3) (emphasis added)). To be clear, Defendant does not suggest that qualitative analyses are necessarily inappropriate in all situations. We are saying, however, that where an expert lacks precise data and relies instead on **qualitative inputs**, it makes no sense to expect reliable and accurate **quantitative outputs**. Yet this is what Plaintiffs have attempted here. Because "a modeler cannot merely input 'small,' 'medium,' or 'large' as the spill volume in a mathematical model," Mr. Terry picked some numbers to represent those qualitative values – *i.e.*, 50, 500 and 2,000 gallons. *See Moreau Opp. Decl.* at ¶ 23. But really

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[1] Mr. Moreau admits in his Site Specific Rebuttal Report that "it is not possible to determine the exact volume of a release based on an amount of contaminated soil removed...." *Declaration of Lisa A. Gerson in Further Support of Exxon Mobil Corporation's Motion to Exclude Opinions of Plaintiff's Expert David Terry* ("Gerson Reply Decl."), Ex. 1 (*Expert Site Specific Rebuttal Report of Marcel Moreau* (Mar. 23, 2009)), at 3; *see also Moreau Opp. Decl.* at ¶¶ 15-21 (seeking to support Mr. Terry's assigned spill volume values with references to amount of contaminated soil removed).

[2] Plaintiffs' assumptions appear to be based, in part, on their belief that MTBE is "ubiquitous" in the Upper Glacial Aquifer beneath Queens. *See Pls.' Mem.* at 1. In support of this belief (and their continued use of this particular word), Plaintiffs cite to a report that was submitted by a putative expert (James Schaeffer) on behalf of Getty Properties Corporation, a former defendant in this case. Getty no longer is in this case, and neither Mr. Schaeffer's testimony nor his report are admissible for, or against, ExxonMobil. ExxonMobil objects to Plaintiffs' continued reliance on, and citation to, a report that was prepared by another settling defendant's putative expert.

there is no difference. Mr. Terry is still telling the model to run a "small," "medium" or "large" (or, as the City's experts say, "significant") spill, although now with a numerical value assigned to each. Mr. Terry purports to offer a quantitative opinion that a specific concentration of MTBE will be present in the Station 6 wells at a specific future date. This allegedly precise, quantitative opinion can rise no higher than its factual predicate which – Plaintiffs admit – is only a qualitative estimate of the amount and date of the release. There is simply too large an analytical gap between this qualitative estimate of critical modeling variables – date and volume released – and a purported quantitative opinion specifying the precise MTBE concentration at some future date. The numerical output of Mr. Terry's modeling has no real-world meaning when it is premised on fictitious input values. Both are unreliable and that is why Mr. Terry's testimony should be barred.

In the case at hand we know that Mr. Terry's opinions are unreliable because Mr. Terry has offered us many different scenarios – Analysis 1 and 2(a) through 2(c) – each of which produces a different result, yet all of which Mr. Terry claims are "reasonable" scenarios.[3] *See Gerson Reply Decl.*, Ex. 2 (*Deposition of David B. Terry* (July 1, 2009)), at 795:14-15. But it simply cannot be true that such different results all are reasonable. And it most certainly is not reasonable to present a jury with a wide-ranging menu of possible answers; such "scientific" testimony will not "assist the trier of fact to understand the evidence." FED. R. EVID. 702. In a situation such as the one we have here, presentation to the jury of precise **quantitative** results is misleading and surely will lead to confusion. *Cf. Consulnet Computing, Inc. v. Moore*, 2008 U.S. Dist. LEXIS 10132, at *9 (E.D. Pa. Feb. 12, 2008) (excluding expert's quantitative analysis

[3] It is Mr. Terry's opinion that Analysis 2(c) is more likely than either 2(a) or 2(b). *See Gerson Reply Decl.*, Ex. 2 at 793:16-21.

where such evidence was likely to confuse the jury); *see also* FED. R. EVID. 403. It is not enough to exclude Mr. Terry's quantitative modeling outputs. Indeed, it is the quantitative modeling outputs that are the basis for all of Mr. Terry's opinions. Accordingly, both his modeling and his opinions must be excluded.

II. PLAINTIFFS' CLAIM THAT 2009 TESTING DATA VALIDATES MR. TERRY'S MODEL IS COMPLETELY UNFOUNDED.

As Defendant already has shown in its opening Memorandum, there is indeed an analytical "chasm" between **actual** MTBE concentrations detected during the 2004-2008 period and the MTBE levels that Mr. Terry's model "predicts" for that same period.[4] *See Def.'s Mem.*, at 9. Plaintiffs have responded that validation of a model is an "ongoing" process, and have given it another shot, so to speak. *See Terry Opp. Decl.* at ¶ 34. As part of his ongoing "validation" Mr. Terry refers to testing data from two rounds of sampling: October 2008 and January 2009. *Id.* Plaintiffs do not attach nor disclose to the Court the results of the October 2008 testing. And Plaintiffs do not attach the report setting forth these results. Please allow Defendant to digress for a moment to fill in this gap. On October 6, 2008 Malcolm Pirnie took 66 samples from monitoring wells in the vicinity of Station 6. *See Gerson Reply Decl.*, Ex. 3 (*Malcolm Pirnie West Side Corporation Final Offsite Plume Delineation and Investigation*

[4] Plaintiffs claim that Defendant's error rate calculations, which Plaintiffs mischaracterize as a statistical analysis, are flawed because they use as validation points "shallow monitoring wells and drinking water supply wells." *Terry Opp. Decl.* at ¶ 36; *see also Def.'s Mem.* at 9 n.5 (describing the simple arithmetic, not statistics, used to determine error rate). But the very purpose of Mr. Terry's analysis is to predict future MTBE concentrations in shallow, drinking water wells – *i.e.* the wells at Station 6. *Terry Opp. Decl.* at ¶ 4 ("The purpose of my analysis was to project future concentrations of MTBE at Station 6 which is comprised of the combined pumping of six wells .... [F]ive of the wells draw a large volume of water from the Upper Glacial aquifer.") What wells could be more telling points for validation then those which test the models ability to accurately predict future concentrations in shallow monitoring and drinking water wells?

Report (Mar. 2009)), at tbl. 7-1. Testing shows that **65 of the 66 samples were non-detect for MTBE** in October 2008. The PCE levels in those same samples were as high as 1,700 ppb and cis-1, 2-dichloroethene, a "breakdown product" of PCE, was detected at up to 800 ppb in some wells. *Id.*

Plaintiffs claim that from this new data – and again, they focus only on the January 2009 data – one will find correlating support for the reliability of Mr. Terry's modeling. *See Pls.' Opp.* at 5. In fact, if there is any correlation between Mr. Terry's modeling predictions and the actual 2009 data, it can only be described as an **inverse** relationship.

As the Court may recall, the output of Terry's Analysis 1 included a 2008 contour map – *i.e.*, a map showing his model's "predicted" MTBE concentration ranges for the simulated period ending 2008. *See Gerson Reply Decl.*, Ex. 4 (*Second Errata to February 6, 2008 Expert Report of David B. Terry* (Apr. 20, 2009)) at 6 & fig. 4. Terry has now plotted the January 2009 data on this same map and asserts that the outcome "show[s] a correlation between observed and simulated results."[5] *Terry Opp. Decl.* at ¶ 35; *Declaration of Daniel Greene in Opposition to Exxon Mobil Corp.'s Motion to Exclude Opinions of Plaintiffs' Expert David Terry* ("Greene Decl."), Ex. I. With all due respect, they show no such thing, and Defendant begs the Court to take a close look at what Plaintiffs hold out as a correlation.

[5] Terry actually performs this exercise twice – once using his preferred dispersivity value of 350 feet and a second time, following the suggestion of Defendant's expert Dr. Driscoll, using a value of 70 feet. *See Terry Opp. Decl.* at ¶ 35; *see also Gerson Reply Decl.*, Ex. 5 (*Expert Rebuttal Report of David B. Terry, P.G.* (Mar. 23, 2009)), at 22. Because it is Mr. Terry's opinion that the reduction of the dispersivity value from 350 to 70 "does not substantially alter the results of Analysis 1," (*Gerson Reply Decl.*, Ex. 5 at 22), Defendant has chosen to focus on Terry's preferred analysis, which uses the 350-foot value.

Page one of exhibit "I" to the Declaration of Daniel Greene provides the graphic representation of Mr. Terry's new "ongoing" validation exercise. Below, for the Court's benefit, are some highlights of what it shows:

Well No.	Mr. Terry's Analysis 1 Model Results MTBE Concentration Ranges with 350-foot Dispersivity, End of 2008	Actual Detected MTBE Concentrations in DEC Investigation Wells, January 2009[6]
W-10	100-500 ppb	3.5 ppb J[7]
W-13	100-500 ppb	12 ppb
W-11	10-100 ppb	0.8 ppb J
W-14	10-100 ppb	4.2 ppb J
W-15	1-10 ppb	370 ppb
MW-24-4	0.5-1 ppb	12 ppb

See Greene Decl., Ex. I at 1. What we see, beginning with the second column, are Mr. Terry's "end of 2008" predictions of MTBE concentration, expressed as a range, for each of the listed wells. *Id.* To the right, in the third column, are the actual MTBE concentrations measured in these wells in January 2009.[8] Although Mr. Terry tells us that "[w]hat is more important is that the *magnitude* of simulated values in [a well] is consistent with what is known about the concentration and location of the confirmed MTBE plume," (*Terry Opp. Decl.* at ¶ 43), what we now know from Exhibit "I" is that Mr. Terry's predictions are frequently off by one or even two

[6] The January 2009 sampling was performed at three different depth intervals – shallow, intermediate and deep. The above table utilizes the highest MTBE detection, regardless of depth, although many other results were non-detect.

[7] The majority of the MTBE values have been designated "J" values, which means that while the compound was detected, the reported value is only an approximate concentration. *Greene Decl.*, Ex. H at tbl. 3-1.

[8] Although Exhibit "I" suggests that we are looking at May 2009 data, in fact Exhibit "H" makes clear that the testing results are from January 2009. For the sake of clarity, Defendant also wishes to point out that the "plumes" depicted in Exhibit "H," at pages 3-3 through 3-5, represent the PCE contamination, not MTBE contamination. *See Greene Decl.*, Exs. H & I.

orders of magnitude – *i.e.* by a factor of 10 and 100, respectively. No need to do any "tricky" calculations here; this is no correlation, or at least not one that will be helpful to a jury.

CONCLUSION

For the foregoing reasons, Defendant respectfully requests that the Court grant Defendant Exxon Mobil Corporation's Motion to Exclude Opinions of Plaintiff's Expert David Terry.

August 4, 2009
New York, New York

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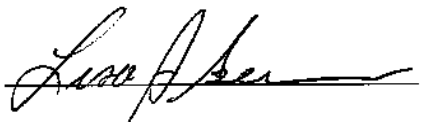
CERTIFICATE OF SERVICE

Lisa A. Gerson, pursuant to 28 U.S.C. 1746, hereby declares under penalty of perjury, that on the 4th day of August, 2009, I caused to be served by electronic means upon counsel for plaintiff, a true and correct copy of: REPLY MEMORANDUM OF LAW IN FURTHER SUPPORT OF EXXON MOBIL CORPORATION'S MOTION TO EXCLUDE OPINIONS OF PLAINTIFF'S EXPERT DAVID TERRY.



Lisa A. Gerson